EUROMOD NEWS

The tax-benefit microsimulation model for the European Union

EUROMOD is a tax-benefit microsimulation model for the European Union (EU) that enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes and work incentives for the population of each country and for the EU as a whole.

As well as calculating the effects of actual policies it is also used to evaluate the effects of tax-benefit policy reforms and other changes on poverty, inequality, incentives and government budgets. EUROMOD is a unique resource for cross-national research, designed to produce results that are comparable across countries and meaningful when aggregated to the EU level.

EUROMOD is managed, maintained, developed and updated by a team of researchers in ISER. This is done in collaboration with national experts. The current version of EUROMOD represents the accumulation of technical developments and expertise over a number of years and involving a large team of people. For more information on the design and development of EUROMOD click here.

www.euromod.ac.uk

Next Director of EUROMOD announced

We are delighted to announce the appointment of Matteo Richiardi as the next Director of EUROMOD and Professor of Economics at the University of Essex

Matteo Richiardi

Professor Richiardi will join Professor Holly Sutherland, the current Director of EUROMOD, for a four-month transition period from June to take over formally as Director in October 2018.

Professor Sutherland, who has led EUROMOD and the pioneering microsimulation work at Essex since its inception 22 years ago, will continue as Research Professor at the Institute for Social and Economic Research at the University of Essex.

EC report uses EUROMOD to highlight role of fiscal policy in stabilising household incomes during Great Recession

The European Commission has recently published its annual Report on Public Finance in European Monetary Union. This year's publication includes analyses on the impact of fiscal policy on income distribution.

Report on Public Finances in EMU

2017

INSTITUTIONAL PAPER 069 | JANUARY 2018

EUROPEAN ECONOMY

Researchers used EUROMOD to assess the impact of fiscal policies in reducing income inequality and stabilising households' income in the EU during the period 2004-2014, finding that: "The degree of direct automatic stabilisation is fairly high in the EU in 2014 according to new simulations based on EUROMOD.

"Around 33% of disposable income is absorbed in the EU on average by the tax and benefit system following a shock to market income, ranging from 20% in Bulgaria to 45% in Austria. Consumption is absorbed by even 70% in the EU on average due to the tax and benefit system and the saving behaviour, ranging from 64% in Bulgaria to 75% in Ireland. The more progressive the tax and benefits system, the higher its stabilisation effect."

You can download the report here.

Continued from previous page Professor Richiardi has been at the Institute for New Economic Thinking at the Oxford Martin School at the University of Oxford for the past five years, and before that at the University of Torino in Italy. He has also worked as a consultant on labour market and social protection policies for the World Bank and national government agencies, and is the Chief Editor of the International Journal of Microsimulation.

Professor Richiardi said: "I am greatly honoured to be joining the EUROMOD team at the Institute for Social and Economic Research. EUROMOD is a terrific achievement, arguably the most successful example of microsimulation modelling for its wide country coverage, attention to model validation and cross-country consistency, institutional and scientific recognition.

I'm looking forward to exploring new collaborations with government agencies, think tanks and universities in the UK and abroad, further strengthening the reputation of ISER and Essex as the leading research institution for international microsimulation."

Professor Holly Sutherland said: "I am delighted that Matteo will be taking over from me and I am confident that his vision for EUROMOD will ensure its future success. I am looking forward to working with him over the next few months."

Prestigious honour for ISER

EUROMOD was among the achievements of ISER and the University of Essex to be recognised by the awarding of the prestigious Queen's Anniversary Prize at Buckingham Palace in London recently

The prize is the highest form of national recognition for the work of a UK university. Attending the ceremony, alongside ISER Director Professor Emily Grundy and the University of Essex Vice Chancellor, Professor Anthony Forster, were EUROMOD team member Katrin Gasior and four other ISER PhD students, who met with His Royal Highness Prince Charles and the Duchess of Cornwall at the Palace.

The award was given for 'Authoritative social and economic research to inform the policies of governments for the improvement of people's lives' and recognised the impact of EUROMOD in informing effective policy evaluation, alongside ISER's survey methodology expertise, the ground-breaking British Household Panel Survey and its successor, *Understanding Society* the UK Household Longitudinal Study, and the work of ISER's ESRC Research Centre on Micro-Social Change (MiSoC).

Professor Anthony Forster and Professor Emily Grundy receive the Queen's Anniversary Prize from Their Royal Highnesses The Prince of Wales and The Duchess of Cornwall

(L-R) ISER's Elif, Katrin, Cathie and Enrico pictured outside at Buckingham Palace on the day of the ceremony

Projects using EUROMOD: Net-SILC3

This time we highlight the research project 'Net-SILC3: Third Network for the Analysis of EU-SILC'.

Net-SILC3 is a collaborative research project (2016-2020), funded by Eurostat. It brings together seventeen partners, including national statistical offices, universities and research bodies, and is led by the Luxembourg Institute of Socio-Economic Research (LISER). Its objective is to carry out in-depth methodological work and socio-economic analysis of the EU-SILC data and develop common tools and approaches regarding various aspects of the data production. One of its strands aims to develop robust policy-relevant indicators in the field of income dynamics and living conditions.

There are currently two EU indicators that are used to assess the effects of social transfers on financial poverty. These are the at-risk-of-poverty (AROP) rate before social transfers, where pensions are included in social transfers and the AROP rate before social transfers, where pensions are excluded from social transfers. These indicators measure AROP in hypothetical situations where social transfers are supposed to be absent from a country's welfare system. They are then compared against the standard AROP after social transfers to show the effectiveness of the latter in reducing financial poverty.

In this project, ISER researchers Chrysa Leventi, Andrea Papini and Holly Sutherland will use EUROMOD to explore alternative ways to define social transfers and measure their effects on poverty reduction. In particular, their work will address the following issues: (a) the treatment of taxes and social insurance contributions paid on transfers; (b) the definition of pensions and their treatment as original income or as transfers; (c) the role of different types of transfers, such as means-tested and non-means-tested benefits, in poverty reduction; and (d) the role of policy interdependencies when constructing hypothetical scenarios where transfers are set to zero. Based on the findings of this microsimulation exercise, potential improvements to the two policy indicators will be suggested.

The Saeima, the parliament of the Republic of Latvia in Rīga

World Bank completes Latvia Tax Review

The review, requested by the Ministry of Finance, had three main objectives: to identify options to increase revenues to finance higher spending; to improve the design of the tax system, enhancing productivity and business competitiveness; and to make the tax system more equitable

Tax and benefit reform simulations were conducted using EUROMOD and Latvian EU-SILC 2012 and EU-SILC 2015. The simulations examined fiscal and distributional impacts of tax and benefit measures and their combinations including:

1 the introduction of a progressive rate structure;
2 the introduction of an earned income tax credit (EITC) that is effectively a tax subsidy (tax return) for eligible low-earners;
3 lowering the withdrawal rates of GMI from 100 percent to 50 percent or 75 percent, thus widening the eligible population and increasing their financial incentives to seek formal sector employment; and
4 introduction of the joint taxation of married couples (in case of progressive rate structure and/or introduction of EITC).

According to World Bank staff's recommendations based on the simulation results, the high EMTR (effective marginal tax rate) on incomes at – or just above – the minimum threshold should be reduced, in order to increase (formal sector) labour force participation and encourage workers within the formal sector to pursue higher earnings. This could be accomplished either through a system of earned income tax credits or income disregards in the calculation of eligibility for the GMI and housing allowances.

At the same time, the Government should consider raising the personal income tax (PIT) rate on higher incomes (i.e., a progressive PIT with three rates with higher rates on higher incomes, decreased rate for the lower incomes), in order to improve the progressivity of the tax system as a whole and generate additional revenues. According to the simulations, both measures (introduction of progressive PIT rate and introduction of EITC) could be accomplished simultaneously at little net cost to the government. More radical increases in the PIT rate on higher incomes, or more parsimonious tax credits would, of course, increase the net revenue yields to the government.

Latvia's high level of inequality (in the EU context) could be reduced by spending more on means-tested benefits, setting withdrawal rates for minimum-income guarantees and housing at less than 100 percent, and removing the ceiling on social contributions. In-work benefits, such as earned income tax credits, offer advantages in targeting assistance to low-income workers, increasing incentives for labour supply and supporting families. Generally, policy should seek to shift taxes away from labour, particularly to reduce the high participation tax for low-income workers.

The review can be downloaded at http://documents.worldbank.org/curated/en/587291508511990249/Latvia-tax-review

An interview with… Fidel Picos

A new occasional feature draws attention to uses of EUROMOD that might otherwise go unnoticed

'EUROMOD has been accepted by all the parties involved in the negotiations of the Third Greek Programme between the international institutions and the Greek authorities. This means that the results of EUROMOD were the starting point of the discussions and not a matter of discussion themselves'

Please tell us a few things about your background and research interests

I am BSc and PhD in Economics. From the beginning of my academic career my research has been focused on the study of tax reforms and the analysis of the effects of taxation. My PhD thesis was a study of the Nordic model of Dual Income Taxation and its possible implementation in Spain, using microsimulation techniques. This work opened for me a broader research line that included not only income taxation, but also environmental and tourism taxation or consumption taxes, mostly using microdata and microsimulation techniques. I'm also interested and have research experience on analysing inequality and redistribution.

Since 2007 I am an Associate Professor at the Department of Applied Economics of the University of Vigo (Galicia, Spain). I have also been a fellow researcher at the Instituto de Estudios Fiscales (IEF, Spanish Insitute for Fiscal Studies) and at the OECD Centre for Tax Policy and Administration. In October 2015 I took a special leave at my University to work at the European Commission's Joint Research Centre in Seville, where currently I hold a position of Economic Analyst in the Fiscal Policy Analysis Unit.

Where are you currently based, how long have you been there and what exactly are you doing?

During 2017 and part of 2018 I have been based in Athens, in the Greek Ministry of Finance. I came here in the context of the Memorandum of Understanding between the European Commission and Greece. The objective of my mission, funded by the EC's Structural Reform Support Service, is to give technical assistance to the Tax Policy Directorate and the Council of Economic Advisors on the use and development of microsimulation tools, with a specific focus on administrative microdata.

From the very beginning of my stay EUROMOD was used for tax-benefit simulations in the context of the third review of the Greek Programme. But my main contribution has been probably the development of an alternative version of EUROMOD using input data based on 2016 personal income tax returns. Both models have been intensively used for simulating changes on actual or planned reforms of taxes (personal income tax, solidarity contribution, property tax) and benefits (family, housing, social dividend, social energy tariffs). Actually, the alternative model does not replace the standard EUROMOD based on EU-SILC data, but it is an excellent complement: depending on the type of reforms, we have used only one of the models, or even both of them. For example, for the Social Dividend passed in December 2017, the use of tax data was much more adequate because the Social Dividend was a one-off means-tested benefit based on the last tax return of taxpayers. In this way we were able to predict the cost with a deviation of around 1%.
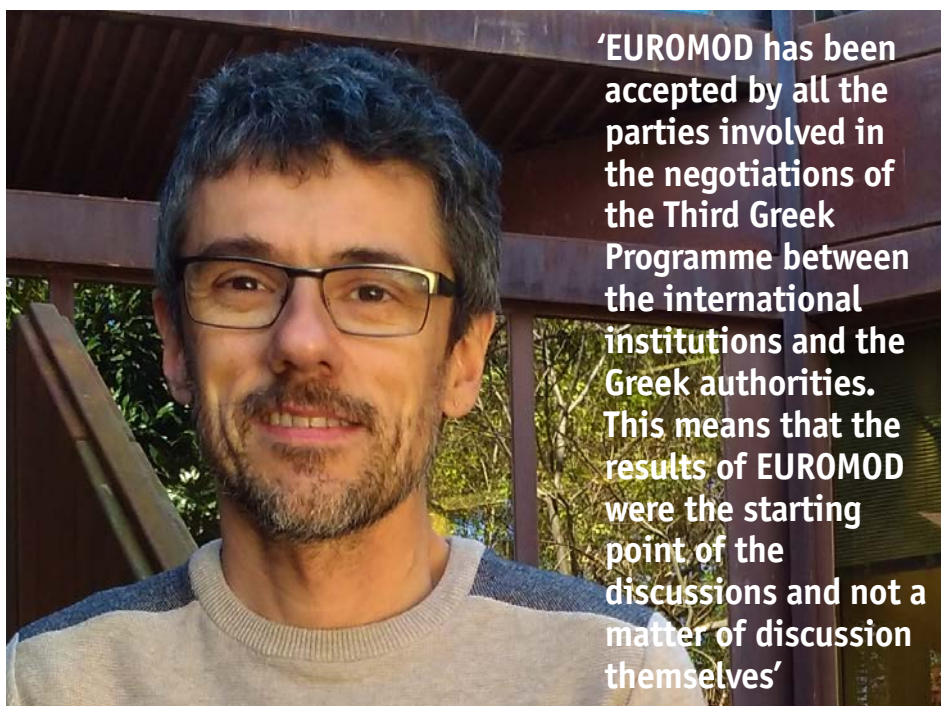
Most of the simulations have been run for the Ministry of Finance and the Ministry of Labour. In order to provide these Ministries with a detailed and complete output of the simulations, I developed a set of Stata do-files that generate more than forty tables with information on revenue, expenditure, distributional impact, inequality and poverty, for up to 12 reform scenarios at the same time. These tables have been widely distributed among policy-makers and representatives of the international institutions, and have been the common ground for the discussions about the reforms implemented during the Greek programme. The experience was very encouraging because the involved parties actually analysed the results, especially those concerning at-risk-of-poverty and the targeting and adequacy when discussing benefit reforms, and the decisions were based on these indicators.

In parallel to the development and use of EUROMOD, I've organised several trainings so that the staff of the Ministry of Finance is able to use the microsimulation tools autonomously when the technical assistance ends.

How is EUROMOD used in your day job?

As explained before, I use EUROMOD on a daily basis in Greece. This intensive use has led me to become much more knowledgeable in EUROMOD, since I had to model all types of reforms, and even introduce completely new benefits from scratch. During my stay here I've been in permanent contact with Chrysa Leventi, co-ordinator of the Greek EUROMOD national team. This has been very useful for me to understand better the modelling of the Greek tax-benefit system, but also for the EUROMOD team, since it was possible for me to get information from the Government that has proved very valuable for improving some of the simulations.

Regarding my work in JRC Seville, I use EUROMOD mostly for the European Semester, which is the EU's annual cycle of economic and fiscal policy coordination and surveillance. Every year the European Commission analyses the reform plans of the member states and provides them with country-specific recommendations, which are related to the Europe 2020 strategy.

Continued from previous page My unit contributes to this process by conducting in-depth analysis of tax-benefit reforms, using EUROMOD and some of its extensions developed to simulate other taxes (consumption, wealth), sometimes jointly with models to assess behavioural responses (labour supply, macroeconomic effects). The reforms we assess can be either hypothetical (usually reflecting the recommendations of the Commission or ongoing discussions in the countries) or actual (already implemented or approved). Our analyses are used in the Country Reports, which are the technical basis for the Country Specific Recommendations issued in May each year.

Please share some highlights of your experience at the Greek MinFin

I think that the experience has been extremely positive. I would like to highlight three things. First, the fact that EUROMOD (in its two versions) has become the key tool for tax-benefit reform analysis in the Ministry of Finance, in a context where microdata and microsimulation tools were hardly used. Second, EUROMOD has been accepted by all the parties involved in the negotiations of the Third Greek Programme between the international institutions and the Greek authorities. This means that the results of EUROMOD were the starting point of the discussions and not a matter of discussion themselves. And third, the availability of a large sample of personal income tax payers made it possible to build an alternative input dataset for EUROMOD, and also to create an alternative EUROMOD spine adapted to it. This alternative version allowed us to simulate with high accuracy some policies that cannot be simulated with EU-SILC data due to lack of information.

Finally, I'd like to highlight the exceptional opportunity of being part of real policy-making processes. Maybe the best example is the implementation of the 2017 one-off Social Dividend. The Council of Economic Advisors (with my assistance) was involved in all the stages of the process: design of the benefit, simulation and analysis of different alternatives, implementation of a web-based application and drafting of the ministerial decision to implement it. This experience made me realise how much this kind of process differs from the academic projects in which I used to be involved, because here any decision taken may have a huge impact on the Government budget and on the society as a whole. And since many decisions have to be taken with extremely short deadlines, being fast and accurate at the same time is really challenging.

EUROMOD informs UK low pay report

The UK Low Pay Commission has recently published a new report, The National Minimum Wage, the National Living Wage and the tax and benefit system by Mike Brewer and Paola De Agostini, ahead of the launch of its latest recommendations to the Government.

The study uses data from the Family Resources Survey and the UK part of the EUROMOD tax and benefit model to create a projection of the circumstances of National Minimum Wage (NMW)/National Living Wage (NLW) families that were observed in 2014-15 as if they were facing the policies that the researchers expect to be in effect in 2020-21, as announced on or before the Spring 2017 Budget.

The National Living Wage (NLW) is an obligatory minimum wage payable to workers in the United Kingdom aged over 25 which came into effect on 1 April 2016 and as of April 2017 was £7.50 per hour. The National Minimum Wage is paid at lower rates to younger workers.

The study found that:

- NMW families are mostly found in the bottom half of the working-age income distribution, and particularly in the poorest 10%. NLW workers are more evenly distributed, and are most likely to be found in the third decile.
- NMW workers contribute more to their families' income than do NLW workers. This mostly reflects that NMW workers are more likely to be single than NLW workers.
- Forecast increases in the NMW/NLW by 2020-21 will increase net incomes of NMW/NLW families by about 1.5%, on average. Low-income NMW/NLW families will gain by slightly more than high-income NMW/NLW families, except for the poorest decile group, which contains very few NLW recipients.
- The weakest financial incentives to work amongst NMW/NLW workers are found in decile groups two to four, where NMW/NLW workers can pay extra tax and social insurance contributions, and lose benefit entitlements when earnings rise.
- A 5% hypothetical rise in the NMW/NLW in 2020-21 would increase the net incomes of NMW/NLW families by an average of under 1.2%. This is a lot less than 5% because some of the rise is lost to extra tax liabilities and benefit withdrawal. Amongst NMW/NLW families, the poorest families would gain a larger fraction of their income, on average.
- A rise in NMW/NLW would look progressive amongst all working-age families where someone is in work, but not amongst all working-age families or the whole population, because it does nothing to directly benefit non-workers.

New reports and outputs

Following December's successful EUROMOD H1.0+ release, a range of new reports and statistical outputs has been published

Accompanying the release, Country Reports – documenting the way in which each country's tax-benefit system is modelled – are now available for all 28 EU member states via https://www.euromod.ac.uk/using-euromod/country-reports.

A feature of each Country Report is an analysis of the distributional effects on household incomes of tax-benefit policy changes between 2016 and 2017 (the latest policy year available in H1.0+, modelled as per policies in place on 30 June). As in previous years, these 28 analyses have been collated and the results have been compared both across countries and time in a consolidated report: **Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2016-2017**.

Also updated for the H1.0+ release, the latest EUROMOD statistics on the distribution and decomposition of disposable income provide estimates of income components (taxes and benefits) by household income decile group as well as inequality and poverty indicators before and after taxes and benefits. Estimates of marginal effective tax rates (METR) are also provided for all countries.

The final output published is the annual **Baseline results from the EU-28 EUROMOD: 2014-2017** which fleshes out these statistics with additional discussion and graphical representations. Additionally, the report provides a summary of the implementations, assumptions and policy simulation scope behind the 'baseline' model simulations.

Meet the EUROMOD national teams: the Lithuanian team

The two members of the Lithuanian EUROMOD team are Jekaterina Navickė and Aušra Čižauskaitė

Tell us about yourselves, your backgrounds and how you got involved in EUROMOD

JN I have been working on EUROMOD development since 2010. First as a member of the Lithuanian national team, together with Romas Lazutka, Viginta Ivaškaite-Tamošiūne and Lina Salanauskaite. Later as a core developer at ISER. Currently I am back in Lithuania and coordinating the development of the national model. I defended my PhD thesis on the topic of poverty reduction in 2015. My other academic interests include social policy analysis, welfare state development, social exclusion and inequality. I am currently a researcher and a lecturer at the Department of Social Policy and Social Work at Vilnius University. I am also a mother of three wonderful daughters.

AC I have attained a Bachelor's degree in Social Policy in 2016 at Vilnius University. This February I have also earned a Master's degree in Social Policy at Vilnius University. Currently I am working as a junior researcher at the scientific home university project called 'Income Smoothing Over the Life-Course from a Social Investment Perspective in the Baltic Countries'. Being involved in the previously mentioned project increased my academic interests in the social investment perspective and its implementation to social security systems. My research interests also cover the institutional tax-benefit structure policies and their redistributive function. Other scientific interests include work-life balance policies and the provision of the public early childhood education and care services in Lithuania.

I joined the Lithuanian National EUROMOD team last year, in 2017. Being a new team member, I have not yet had a possibility to use EUROMOD for research or policy making. However, I am planning to continue my studies, therefore I plan to use the model in my future PhD work.

Does analysis using EUROMOD impact policy making in Lithuania?

JN For a number of years we have been promoting the use of EUROMOD in Lithuania, both academically and for policy making. A number of articles, presentations and bulletins do gain momentum. Currently both representatives of the Ministry of Social Affairs and Labour and the National Audit Office are

Aušra Čižauskaitė

Jekaterina Navickė

trained to use the model and start using it for their needs. The model is also becoming more popular among students and researchers. There is a lot of scope for using microsimulation in my country. My dream is to launch an online version of the model to be used by policy makers, journalists, students and the general public.

If you had the power to propose a radical reform for your country, what would it be?

AC My Masters thesis has shown disappointing results for the social investment policies in Lithuanian children, therefore the reform would definitely be oriented to combat child poverty in Lithuania via tax-benefit reforms for families with children.

JN In Lithuania we have one of the worst situations with regards to income inequality and poverty in the EU. There is a lot of political debate on reforming the tax system as well as the system of social insurance. The former lacks progressivity, the latter suffers from the weak link between the contributions and benefits. EUROMOD is well suited for analysing proposed reforms and developing alternative scenarios.

What are the best (or worst!) things about working on the EUROMOD project?

AC The best thing about EUROMOD project is its necessity for today's policy reforms considering EUROMOD potential and perspectives. Additionally, the strong and creative EUROMOD community inspires me personally to be more involved in EUROMOD use and further policy analysis.

JN There is a joke, that EUROMOD is like the mafia. Once you get into the community of developers and researchers, there is little chance to escape. The work on the model might get a bit technical at times, but it is amazing to be a part of the EUROMOD community and celebrate the results of our joint work and the impact it makes.

Call for papers: income redistribution and the role of tax-benefit systems in Latin America

5-6 July 2018, Instituto de Altos Estudios Nacionales, Quito, Ecuador
United Nations University World Institute for Development Economics Research (UNU-WIDER), together with the EUROMOD team at ISER, Essex, and the Instituto de Altos Estudios Nacionales (IAEN), are delighted to invite researchers to submit papers for an international conference on income redistribution and the role of tax-benefit systems in Latin America.

The conference is part of the activities in the SOUTHMOD project, in which tax-benefit microsimulation models for selected developing countries were built. ECUAMOD, the tax-benefit microsimulation model for Ecuador, has been developed in collaboration with IAEN, UNU-WIDER, and the EUROMOD team at ISER.

Interested applicants wishing to present their original research should complete the online application form. Submissions from early-career, female, and developing country researchers are particularly encouraged. The deadline for submission of papers or extended abstracts is 6 April 2018. Decisions on acceptance will be given by 30 April 2018.

Participants at the EUROMOD/HHoT training course in Antwerp

EUROMOD training course in Antwerp

In January 2018 a EUROMOD/HHoT training course was held in Antwerp, Belgium

This Winter School was organised by the Centre for Social Policy (University of Antwerp) as part of the InGRID2 project.

It combined the traditional EUROMOD training course with an introduction to the Hypothetical Household Tool (HHoT).

HHoT is a state-of-the-art tax-benefit tool for researchers who want to use model family calculations in a European comparative setting. Twenty participants from various countries were taught how to use EUROMOD and HHoT.

In addition to the three-day course, the participants could follow a new module on variance estimations. The course included a variety of lectures, live demonstrations and hands-on training exercise sessions.

EUROMOD-related research presented at conferences

Workshop on Fiscal Policy and Microsimulation, 25-26 January 2018, Valencia

● Daniela Mantovani presented 'Comparing redistributive efficiency of tax-benefit systems in Europe'

● Maria Jouste presented 'Simulating universal pension benefits' work conducted with Pia Rattenhuber

● Sara Riscado presented 'The fiscal and equity impact of tax expenditures in the EU: evidence from microsimulation modelling' work conducted with Francesco Figari and Luca Gandullia

● André Decoster presented 'Piecemeal modelling of the effects of joint direct and indirect tax reforms'

● Xavier Jara presented 'Learning from your neighbour: Tax-benefit systems swaps in Latin America' work conducted with Olivier Bargain and David Rodriguez

● Nizamul Islam presented 'The case for NIT+FT in Europe. An empirical optimal taxation exercise' work conducted with Ugo Colombino

● Borja Gambau-Suelves presented 'Redistributive effects and on the welfare of the substitution of monetary benefits for basic universal income in Spain' work conducted with Nuria Badenes Plá and María Navas Román

● Wouter van der Wielen presented 'Dynamic Scoring of Tax Reforms in Real Time' worked conducted with Salvador Barrios, Adriana Reut and Sara Riscado

Citizen's Basic Income Day, 20 February 2018, London

● Iva Tasseva presented 'How EUROMOD works and what it can achieve: Introducing Participation Income in the UK'

Workshop on Microsimulation and Fiscal Policy, 23 February 2018, Rome

● Francesco Figari presented 'Redistribution in a joint income-wealth perspective: a cross-country comparison' work conducted with Gerlinde Verbist and Sarah Kuypers

● Iva Tasseva presented 'Reducing poverty and inequality through tax-benefit reform and the minimum wage: the UK as a case-study' work conducted with Tony Atkinson, Chrysa Leventi, Brian Nolan and Holly Sutherland

● Carlo Fiorio presented 'Migration: impact on tax and social benefits in the EU' work conducted with Tommaso Frattini and Andrea Riganti

● Katrin Gasior presented 'Nowcasting: timely indicators for monitoring risk of poverty in 2014-2016' work conducted with Olga Rastrigina.

EUROMOD working paper series

An update, a correction, and an extension, of an evaluation of an illustrative Citizen's Basic Income scheme – addendum to EUROMOD working paper EM12/17

EUROMOD Working Paper Series, EM12/17a

Author Malcolm Torry

Publication date 22 March 2018

Abstract This is an addendum to EUROMOD working paper EM 12/17, which updates, corrects and extends the previous evaluation of an illustrative Citizen's Basic Income scheme. Debate about Citizen's Basic Income – an unconditional and nonwithdrawable income for every individual – has shifted in character. An earlier phase related to the proposal's desirability; then followed debate about its feasibility; and now attention has turned to questions of implementation. Working paper EM 12/17 operationalised characteristics of two implementation models in terms of changes that might be required in existing UK tax and benefits systems, and it evaluated the implementation methods in relation to a wider variety of indicators than previous exercises of this kind: poverty and inequality indices, tax rate rises required for revenue neutrality, household disposable income gains and losses, households' abilities to escape from means-testing, and marginal deduction rates. This addendum employs EUROMOD H1.0+ to update the evaluation of one of the two implementation methods, to make a correction in one of the marginal deduction rates, and to extend the evaluation by calculating the number of households able to escape from all means-tested benefits, and by calculating the gains and losses that would be experienced by households containing individuals with disabilities.

Mechanics of replacing benefit systems with a basic income: comparative results from a microsimulation approach

EUROMOD Working Paper Series EM8/18

Authors James Browne and Herwig Immervoll

Publication date 21 March 2018

Abstract Recent debates of basic income (BI) proposals shine a useful spotlight on the challenges that traditional forms of income support are increasingly facing, and highlight gaps in social provisions that largely depend on income or employment status. A universal 'no questions asked' public transfer would be simple and have the advantage that no-one would be left without support. But an unconditional payment to everyone at meaningful but fiscally realistic levels would likely require tax rises as well as reductions in existing benefits. We develop a comprehensive BI scenario that facilitates an assessment of the resulting fiscal and distributional effects in a comparative context, undertake a microsimulation study to quantify them, and propose a simple decomposition to identify the mechanisms that drive effects in different country contexts. Results illustrate the challenges, but also the strengths, of existing social protection systems. A BI would fix benefit coverage gaps that exist in many countries, but would require very substantial tax rises if it were to be set at a meaningful level. As support would not be targeted on those most in need, it would not be a cost-effective way of directly reducing income poverty.

Drivers of participation elasticities across Europe: gender or earner role within the household?

EUROMOD Working Paper Series EM7/18

Authors Charlotte Bartels and Cortnie Shupe

Publication date 20 March 2018

Abstract We compute participation tax rates across the EU and find that work disincentives inherent in tax-benefit systems largely depend on household composition and the individual's earner role within the household. We then estimate participation elasticities using an IV Group estimator that enables us to investigate the responsiveness of individuals to work incentives. We contribute to the literature on heterogeneous elasticities by providing estimates for different socioeconomic groups by country, gender and earner role within the household. Our results show an average elasticity of 0.08 for men and of 0.14 for women as well as a high degree of heterogeneity across countries. The commonly cited difference in elasticities between men and women stems predominantly from the earner role of the individual within the household and nearly disappears once we control for this factor.

The use of hypothetical household data for policy learning – EUROMOD HHoT baseline indicators

EUROMOD Working Paper Series: EM6/18

Authors Katrin Gasior and Pasquale Recchia

Publication date 19 March 2018

Abstract Tax-benefit microsimulation models are typically used to assess the impact of policy changes on the income distribution based on micro data representative of the population. Such analysis assesses the effects of tax-benefit policies by considering their interaction effects and the population structure, which are both important elements for an overall assessment of complex realities. However, it can be helpful to abstract from this complexity and to explain the effects of tax-benefit policies using concrete examples. Using hypothetical households visualises how single policies are linked with each other while leaving the additional complexity of the population structure aside. This paper uses the Hypothetical Household Tool (HHoT) to generate hypothetical household data that can be used in EUROMOD, the tax and benefit microsimulation model of the European Union, to analyse current tax and benefit policies as well as the effects of policy changes in a comparative manner. The paper provides a brief introduction of the use of hypothetical data in general and presents concrete examples of its application. The main part proposes a set of basic indicators that can be used to learn about European tax-benefit systems in a comparative perspective.

Baseline results from the EU28 EUROMOD: 2014-2017

EUROMOD Working Paper Series EM5/18

Author Miko Tammik

Publication date 19 February 2018

Abstract This paper presents baseline results from the latest version of EUROMOD (version H1.0+), the tax-benefit microsimulation model for the EU. First, we briefly report the process of updating EUROMOD. We then present indicators for income inequality and risk of poverty using EUROMOD and discuss the main reasons for differences between these and EU-SILC based indicators. We further compare EUROMOD distributional indicators across all EU 28 countries and over time between 2014 and 2017. Finally, we provide estimates of marginal effective tax rates (METR) for all 28 EU countries in order to explore the effect of tax and benefit systems on work incentives at the intensive margin. Throughout the paper, we highlight both the potential of EUROMOD as a tool for policy analysis and the caveats that should be borne in mind when using it and interpreting results. This paper updates the work reported in Makovec and Tammik (2017).

Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2016-2017

EUROMOD Working Paper Series EM4/18

Authors EUROMOD

Publication date 18 February 2018

Abstract This paper provides a short country-by-country harmonised analysis – using EUROMOD – of the distributional effects on household disposable income of direct tax and cash benefit and pension policy changes between 2016 and 2017. It is the latest in this series of reports, available as EUROMOD working papers, produced annually on the public release of an updated EUROMOD. At the same time, last year's equivalent report – covering policy changes between 2015 and 2016 – has also been revised to account for the availability of more recent input micro-data, model extensions and corrections and finalised HICP values for 2016.

Redistribution in a joint income-wealth perspective: a cross-country comparison
EUROMOD Working Paper Series EM3/18

Authors Sarah Kuypers, Francesco Figari and Gerlinde Verbist

Publication date 17 February 2018

Abstract Redistribution is usually understood in terms of income; as a way to rank individuals as well as to determine taxable capacity or benefit eligibility. Yet, it is increasingly argued that more prominence should be given to the joint distribution of income and wealth and interest in the taxation of wealth for redistributive purposes has largely increased. By including the HFCS data in the microsimulation model EUROMOD we add two novel aspects to the literature. First, we include the analysis of taxes on wealth and wealth transfers. Second, we evaluate redistributive effects of tax-benefit systems against the joint income-wealth distribution instead of income only. We show that expressing living standards in terms of both income and wealth results in considerable reranking of individuals, which in turn leads to a lower redistributive impact of tax-benefit systems than is traditionally considered.

Improving income protection for the elderly poor in Ecuador
EUROMOD Working Paper Series EM2/18

Authors Cesar A. Amores L. and Holguer Xavier Jara Tamayo

Publication date 22 January 2018

Abstract A series of social benefits targeting vulnerable groups, such as the elderly population, has been implemented in Ecuador over the last few decades. Elderly adults living in vulnerable conditions and not affiliated with social security are entitled to noncontributory pension assistance under the Human Development Transfer program. However, over one quarter of old-age beneficiaries still live in poverty and the recent fall in oil prices has put increasing pressure on government expenditures to deliver such schemes. This paper aims to assess the current needs of old-age adults based on expenditure data, and makes use of microsimulation techniques to evaluate the effect of covering those needs through an increase in pension assistance. Our results show that increasing pension assistance to match the level of the poverty line in Ecuador would reduce elderly poverty by 40% and would take 18% of old-age beneficiaries out of poverty. We analyze the effect of additional hypothetical reforms and discuss the importance of using microsimulation techniques, in particular to assess the effect of budget neutral reforms in a macroeconomic environment with low oil prices.

Financial work incentives and the longterm unemployed: the case of Belgium
EUROMOD Working Paper Series EM1/18

Author Diego Collado

Publication date 21 January 2018

Abstract There is an abundant body of research studying the effect of financial work incentives on employment. Most studies exploit variation within groups over time or across employed and unemployed people, while little research has studied individual changes over time and focused on the long-term unemployed (LTU). In Belgium the long-term unemployment rate is high and the household incomes of many LTU are below the at-risk-of-poverty threshold. Policy proposals aiming to improve this situation might benefit from knowing whether changes in work incentives affect the likelihood of taking up work. Thus, we study whether changes in work incentives, measured by the participation tax rate (PTR), affected the likelihood of going from long-term unemployment to more than half a year of employment. We examine the seven two-year episodes that took place between 2005 and 2012 in Belgium. During these years there were policy changes that affected work incentives and thus contribute to the identification of behavioural effects. We also study whether changes in effective marginal tax rates (EMTRs) affected the hours worked by people already in the labour market working part-time. Increasing out-of-work incomes while maintaining how much work pays would require increasing in-work compensations. As this would probably raise EMTRs, studying the intensive margin is also warranted. We calculate work incentives using the tax-benefit microsimulation model EUROMOD, adapting it to utilise longitudinal data. Results from regression analysis show that a 10 percentage point increase in the PTR (i.e. if work paid less) had a negative average marginal of around 4 percentage points on the probability of taking up work. This effect is sizable considering that the baseline probability of transitioning to more than half a year of employment was 9 per cent. Changes in EMTRs did not have a statistically significant effect on hours worked by part-timers. This might leave some room to compensate increases in out-of-work transfers with changes in in-work transfers.

The case for NIT+FT in Europe. An empirical optimal taxation exercise
EUROMOD Working Paper Series EM18/17

Authors Nizamul Islam and Ugo Colombino

Publication date 20 December 2017

Abstract We present an exercise in empirical optimal taxation for European countries from three areas: Southern, Central and Northern Europe. For each country, we estimate a microeconometric model of labour supply for both couples and singles. A procedure that simulates the households' choices under given tax-transfer rules is then embedded in a constrained optimization program in order to identify optimal rules under the public budget constraint. The optimality criterion is the class of Kolm's social welfare function. The tax-transfer rules considered as candidates are members of a class that includes as special cases various versions of the Negative Income Tax: Conditional Basic Income, Unconditional Basic Income, In-Work Benefits and General Negative Income Tax, combined with a Flat Tax above the exemption level. The analysis show that the General Negative Income Tax strictly dominates the other rules, including the current ones. In most cases the Unconditional Basic Income policy is better than the Conditional Basic Income policy. Conditional Basic Income policy may lead to a significant reduction in labour supply and poverty-trap effects. In-Work-Benefit policy in most cases is strictly dominated by the General Negative Income Tax and Unconditional Basic Income.

The impact of in-work benefits on female labor supply and income distribution in Spain
EUROMOD Working Paper Series EM17/17

Authors Luis Ayala and Milagros Paniagua

Publication date 30 October 2017

Abstract In-work benefits (IWBs) have become very common transfer programs that seek to meet both efficiency and equity targets. An expanding literature has assessed the effects of these policies on income distribution and labor supply showing important implications for female labor participation. In this paper,

we estimate the distributional and behavioural impacts of a simulated IWB in Spain based on the replacement of the existing working mother tax credit (WMTC) using as a reference the US Earned Income Tax Credit (EITC). We simulate the effects of the proposed scheme using EUROMOD and a discrete choice model of labor supply. Our results show that the enhancement of the proposed IWB would have significant and positive effects both in terms of female labor participation and inequality and poverty reduction. The introduction of this IWB would generate a substantial increase in labor participation at the extensive margin and a non-negligible reduction at the intensive margin.

Where they turned up

Since the last edition of *EUROMOD NEWS*, newly-published journal articles using EUROMOD include:

Avram, S. (2017) Who benefits from the 'hidden welfare state'? The distributional effects of personal income tax expenditure in six countries, *Journal of European Social Policy*, **https://doi.org/10.1177/0958928717735061**

Fuchs, M., Hollan K. and K. Gasior (2017) Simulation of an application of the Hartz-IV reform in Austria, *Public Sector Economics,* 41: 4 480-500

Ayala, L. and M. Paniagua (2018) The impact of tax benefits on female labor supply and income distribution in Spain, *Review of Economics of the Household*, **https://doi.org/10.1007/s11150-018-9405-5**

Paetzold, J. and M. Tiefenbacher (2018) Distributional and revenue effects of a tax shift from labor to property, *International Tax and Public Finance*, **https://doi.org/10.1007/s10797-018-9484-5**

A special issue of *The Journal of Economic Inequality* paid tribute to the late Sir Tony Atkinson's pioneering work on the analysis of tax-benefit systems – including the development of microsimulation models – and the way they affect income distribution and welfare.

Five articles in that issue made use of EUROMOD:

Atkinson, A. B., Leventi, C., Nolan, B., Sutherland H. and I. Tasseva (2017) Reducing poverty and inequality through tax-benefit reform and the minimum wage: the UK as a case-study, *The Journal of Economic Inequality*, 15:4 303-323

Browne, J. and H. Immervoll (2017) Mechanics of replacing benefit systems with a basic income: comparative results from a microsimulation approach, *The Journal of Economic Inequality* 15:4 325-344

Bargain, O., Jara, H. X. and D. Rodriguez (2017) Learning from your neighbor: tax-benefit systems swaps in Latin America, *The Journal of Economic Inequality*, 15:4 369-392

Bargain, O. (2017) Welfare analysis and redistributive policies, *The Journal of Economic Inequality*, 15:4 393-419

Jara, H. X. and E. Schokkaert (2017) Putting measures of individual well-being to use for ex-ante policy evaluation, *The Journal of Economic Inequality* 15:4 421-440

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